

BASIC APPLICATION INFORMATION**PART B. ADDITIONAL APPLICATION INFORMATION FOR APPLICANTS WITH A DESIGN FLOW GREATER THAN OR EQUAL TO 0.1 MGD (100,000 gallons per day).**All applicants with a design flow rate ≥ 0.1 mgd must answer questions B.1 through B.6. All others go to Part C (Certification).**RECEIVED**

MAR 09 2009

DIVISION OF WATER**B.1. Inflow and Infiltration.** Estimate the average number of gallons per day that flow into the treatment works from inflow and/or infiltration.100 gpd

Briefly explain any steps underway or planned to minimize inflow and infiltration.

RAISING AND SEALING MANHOLES**B.2. Topographic Map.** Attach to this application a topographic map of the area extending at least one mile beyond facility property boundaries. This map must show the outline of the facility and the following information. (You may submit more than one map if one map does not show the entire area.)

- The area surrounding the treatment plant, including all unit processes.
- The major pipes or other structures through which wastewater enters the treatment works and the pipes or other structures through which treated wastewater is discharged from the treatment plant. Include outfalls from bypass piping, if applicable.
- Each well where wastewater from the treatment plant is injected underground.
- Wells, springs, other surface water bodies, and drinking water wells that are: 1) within 1/4 mile of the property boundaries of the treatment works, and 2) listed in public record or otherwise known to the applicant.
- Any areas where the sewage sludge produced by the treatment works is stored, treated, or disposed.
- If the treatment works receives waste that is classified as hazardous under the Resource Conservation and Recovery Act (RCRA) by truck, rail, or special pipe, show on the map where that hazardous waste enters the treatment works and where it is treated, stored, and/or disposed.

B.3. Process Flow Diagram or Schematic. Provide a diagram showing the processes of the treatment plant, including all bypass piping and all backup power sources or redundancy in the system. Also provide a water balance showing all treatment units, including disinfection (e.g., chlorination and dechlorination). The water balance must show daily average flow rates at influent and discharge points and approximate daily flow rates between treatment units. Include a brief narrative description of the diagram.**B.4. Operation/Maintenance Performed by Contractor(s).**Are any operational or maintenance aspects (related to wastewater treatment and effluent quality) of the treatment works the responsibility of a contractor? ☐ Yes ☒ No

If yes, list the name, address, telephone number, and status of each contractor and describe the contractor's responsibilities (attach additional pages if necessary).

Name: _____

Mailing Address: _____

Telephone Number: _____

Responsibilities of Contractor: _____

B.5. Scheduled Improvements and Schedules of Implementation. Provide information on any uncompleted implementation schedule or uncompleted plans for improvements that will affect the wastewater treatment, effluent quality, or design capacity of the treatment works. If the treatment works has several different implementation schedules or is planning several improvements, submit separate responses to question B.5 for each. (If none, go to question B.6.)

- List the outfall number (assigned in question A.9) for each outfall that is covered by this implementation schedule.

- Indicate whether the planned improvements or implementation schedule are required by local, State, or Federal agencies.

☐ Yes ☒ No

c If the answer to B.5.b is "Yes," briefly describe, including new maximum daily inflow rate (if applicable).

d. Provide dates imposed by any compliance schedule or any actual dates of completion for the implementation steps listed below, as applicable. For improvements planned independently of local, State, or Federal agencies, indicate planned or actual completion dates, as applicable. Indicate dates as accurately as possible.

Implementation Stage	Schedule MM / DD / YYYY	Actual Completion MM / DD / YYYY
- Begin construction	_____	_____
- End construction	_____	_____
- Begin discharge	_____	_____
- Attain operational level	_____	_____

e. Have appropriate permits/clearances concerning other Federal/State requirements been obtained? ☐ Yes ☐ No

Describe briefly: _____

B.6. EFFLUENT TESTING DATA (GREATER THAN 0.1 MGD ONLY).

Applicants that discharge to waters of the US must provide effluent testing data for the following parameters. Provide the indicated effluent testing required by the permitting authority for each outfall through which effluent is discharged. Do not include information on combined sewer overflows in this section. All information reported must be based on data collected through analysis conducted using 40 CFR Part 136 methods. In addition, this data must comply with QA/QC requirements of 40 CFR Part 136 and other appropriate QA/QC requirements for standard methods for analytes not addressed by 40 CFR Part 136. At a minimum, effluent testing data must be based on at least three pollutant scans and must be no more than four and one-half years old.

Outfall Number: 001

POLLUTANT	MAXIMUM DAILY DISCHARGE		AVERAGE DAILY DISCHARGE			ANALYTICAL METHOD	ML / MDL
	Conc.	Units	Conc.	Units	Number of Samples		
CONVENTIONAL AND NONCONVENTIONAL COMPOUNDS.							
AMMONIA (as N)	13 mg/L		0.34		48		
CHLORINE (TOTAL RESIDUAL, TRC)	<0.010		<0.010		48		
DISSOLVED OXYGEN	8.7		8.4		48		
TOTAL KJELDAHL NITROGEN (TKN)	22 mg/L		14		3		
NITRATE PLUS NITRITE NITROGEN	1.47 mg/L		0.995		3		
OIL and GREASE	20 mg/L		20		3		
PHOSPHORUS (Total)	5.85		3.48		48		
TOTAL DISSOLVED SOLIDS (TDS)	302 mg/L		281		3		
OTHER							

END OF PART B.

REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM A YOU MUST COMPLETE

AS BUILT PLANS

DESIGN INVESTIGATION
FOR
MADE WATER TREATMENT FACILITIES
PENNY FARM, KENTUCKY

QUANTITY

This subsurface investigation was performed to determine geophysical soil design parameters and bearing capacities for the site, which will be shown during the design phase of the proposed project.

LOCATION

The site is located in Penny Farm, Kentucky adjacent to Illinois Central Railroad tracks.

FIELD INVESTIGATION

Six (6) borings were made at the construction site. All borings were drilled with a 4 inch O. D. Auger powered by a GCE Drill rig. Borings 1, 2, 3, and 4 were drilled to a depth of 25 feet and are located at the proposed lagoon. The upper cuttings were taken and field classification. Borings 5 and 6 were drilled to a depth of 10 feet with standard penetration tests taken at 4 feet and 9 feet. These borings are located at the equipment building and adjacent structures.

The water table was not intercepted in any of the borings on that date. (4-1-79)

SOIL SAMPLE ANALYSIS

In general, the site's subsurface consists of 2 to 4 feet of fill (Silt-clay) over 3 to 7 feet of Silt-clay (SM-CL). At approximately 7 to 11 feet deep, in borings 2, 3, and 4 a clay material was intercepted. It varied from boring to boring in composition. In clay (CL) with liquid limit of 25.5 and plasticity index of 13.1. The permeability of this material is .001 x 10⁻⁶ centimeters per second.

Standard Penetration Tests were performed in borings 5 and 6 for determining acceptable bearing values for foundation design of the proposed equipment building and adjoining structures.

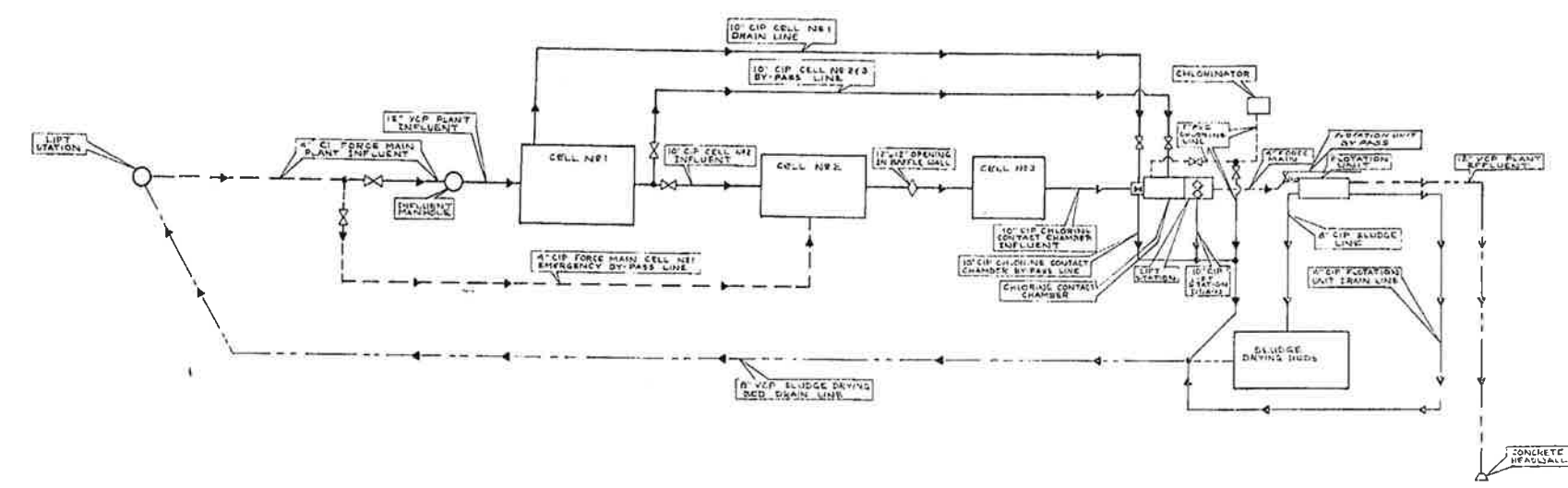
It is recommended a maximum bearing capacity of 1.5 kips per square foot for footings placed 30 inches below existing surface.

During construction the top layer of exposed silt may become soft and absorb moisture and the kneading effect of walking on it. Therefore the footings should be constructed and backfilled as excavation is completed. If this material shows the top 6 inches of natural soil should not be removed until preparations for placing the concrete are complete.

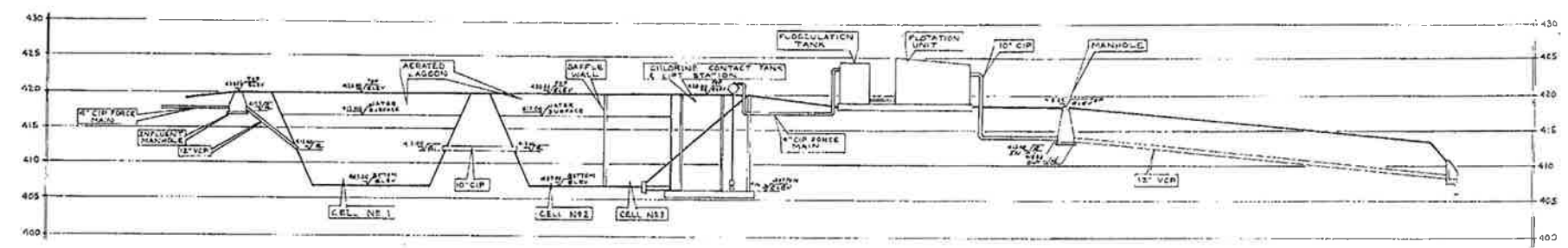
Foundations structures may be constructed using the Silt and Silt-clay unknown material with liners as required by State Agencies. Organic silts and clays (top soil) are generally considered unacceptable for construction purposes. The top 2 to 10 inches of topsoil, roots, grass, etc. should be removed before placing fill. Fill materials should be compacted to at least 95% maximum dry density as determined by A.S.T.M. C98.

Again we remind you that Western Kentucky is considered a Zone 3 for earthquake structural and earth stability design.

The subsurface investigation was performed and documented by Florence Hutchison, Inc., Consulting Engineers, in August, 1979, and the boring information is furnished for design information only. Contractor, owner or engineer does not guarantee or warrant that materials or quantities encountered during construction will be the same as indicated. Bidder must satisfy himself regarding quantities, quantities, and conditions of subsurface soils and work to be done. No claims will be considered for additional compensation if the materials encountered are not in accord with the classifications shown.



SCHEMATIC FLOW DIAGRAM



HYDRAULIC FLOW DIAGRAM

AS BUILT PLANS

DRAWN BY	WATER TREATMENT
CHECKED BY	WATER TREATMENT
APPROVED BY	WATER TREATMENT
REVISIONS	

WATER TREATMENT FACILITIES
PENNY FARM, KENTUCKY